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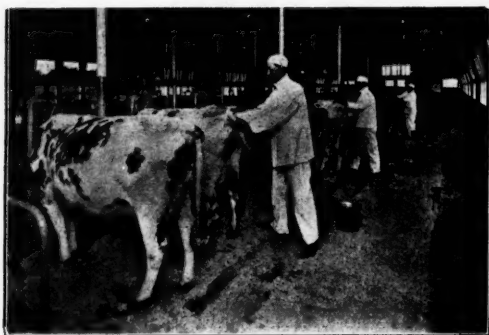
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ORIGINAL ARTICLES

PROGRESS IN PSYCHIATRY IN THE LAST TWENTY-FIVE YEARS*

ARTHUR H. HARRINGTON, M.D.

PROVIDENCE, R. I.

"The present century has witnessed an advance in the field of psychiatry which is unprecedented and has resulted in no less than a complete revolution in our ways of thinking of mental disease." Such are the opening words in the preface to "Foundations of Psychiatry" by Dr. William A. White.

A change has come about in the past twenty-five years in the way we have been thinking of mental disease. We have thought of it as "insanity." We have described it minutely with a large catalogue of names, to label its symptoms, but the great advance has been made in the definite attempt to interpret these outward manifestations in terms that will correspond with the forces which shape the personality. The adequate approach to psychiatry is to-day believed to be found in the biological, psycho-biological, and the sociological factors combined; the doing away, for the purpose of studying human behavior, with the metaphysical distinctions between body and mind.

In medical teaching, and to-day largely in medical practice, the human subject is regarded as made up of different organs, which are studied and treated to a great extent without reference to the fact that they are a part, or one unit of a whole. Such an attitude, no doubt, has been quite natural during the development of specialization in medicine, but progress has undoubtedly been made in the concept of the individual and in the better understanding of behavior by considering the organism as a whole, and stressing the point that we should regard reactions which

seemingly are partial, as manifestations of the whole.

This seems to be at the foundation of what we may regard as the beginning of the scientific era of psychiatry, and in fact should logically apply to internal medicine as well, and by that token, bringing the psychiatrist and the internist into the most advantageous position for correlating their facts. I think it may be truthfully said that psychiatry is the only branch of medicine to-day that deals with total reactions, and that this conception is of comparatively recent growth.

In the lowest forms of life the reactions are all physico-chemical and there is possible only an extremely limited range of adjustment to the environment, such as absorbing energy from the sun's rays or elements from the soil or water for the continuance of life. When we come to higher forms of life with some differentiation in organs, we find the organs integrated and working together by means of a vegetative nervous system and with still greater adjusting mechanisms to the environment. Going up the scale, we come at last to an organism with the first evidence of a psyche, the latter being the result of an evolutionary and biological integration. With each rising step, and with each integration, we find a corresponding capacity for adjustment to, and for making use of the environment, and, at the same time, with an increasing complexity in reactions between the individual and the environment.

The average human being to-day comes into the world with an endowment, which is the result of at least, it is believed, 500,000 years of evolutionary development of the human race with a psyche of the same period of time bearing every trace of untold millions of trial and error. With him have come from the very first the instincts of the race; they have never fundamentally changed. Society, however, has constantly been growing more and more complex, calling in every age for greater and greater sublimations, calling upon the individual to give up more and more of himself for the good of society. We finally have the individual reacting at the psychological level

*Read before the New England Society of Psychiatry at a meeting held at the State Hospital for Mental Diseases, Howard R. I., April 3rd, 1928.

of his evolutionary development, as a psychophysical integration.

Now at the psychological level between the individual and his environment, meaning largely society, occur the adjustments, adequate or inadequate which constitute either the success or failure of the individual at this level. Failure or in other words mal-adjustment may apply to the child, whatever his age, or to the adult whatever his age. These mal-adjustments may mean a disappointed individual, a warped personality, a neurotic, a psychopathic individual, a psychotic individual, a delinquent, a criminal, a vagrant, any one of the homeless habitually unemployed. To-day a broad psychiatry deals with all of these in the field of prevention, adjustment and treatment.

For the first time in history there is manifested a wider interest in disorders of the mind, outside the ranks of the medical profession, than has ever been the case. This shows itself especially in relation to the social aspects of human life. The success of an individual, or on the other hand his failure is explained as attributable to personality factors, which have behind them mental implications; in fact, where social problems are encountered or where failures to make adequate adjustments to environments are found, they are being analyzed in terms of mentality.

Psychiatrists for the first time have recently perceived a field in which they may contribute to the psychiatric needs of the community, and in many instances we see organized efforts in these directions.

In the first place, the psychiatrist, whether engaged in an institution or out of it, is in a position to establish contacts with the community through mental hygiene societies, or other organizations where they exist to-day, and to engage in the educational efforts so necessary before measures of a concrete nature can be entered upon. Already in very many localities educational work in the public is bringing to notice the value of mental health and the great wastage from mental disease and this is making progress in creating an attitude of mind on the part of the public, willing and even eager to accept the help of the psychiatrist in social difficulties and mal-adjustments. To consult a psychiatrist to-day is not to any such extent as formerly an implication of "insanity."

Practical ways of accomplishing active work are seen to-day in the development of clinics for out-patients in connection with hospitals for mental diseases, and also in connection with general hospitals in numerous instances. This development, however, although its great usefulness has been demonstrated in a sufficient number of instances, justifies a far wider adoption of such methods. The number of such clinics is thus far too few.

The establishment of mental health clinics in a community is of inestimable value, because the psychiatrist has the opportunity of detecting the very earliest factors as to the social relationships, economic conditions, and environmental causes of strained relationships in home, or employment and otherwise, which may be the forerunners of a clearly defined mental deviation, which at the moment may be intelligently treated. The progress in psychiatry in such instances is seen in that no psychiatrist, nor even any physician, would probably have had any contact with the patient previous to such community work.

Administrative Boards are already recognizing, here and there, that the mental hospitals have responsibilities toward the communities they serve, aside from the care of committed cases. It is seen to be possible by out-patient clinics, with adequate psychiatric social service, to diminish the number of commitments and through the same agency to reduce the number of residents in a hospital by bringing about social rehabilitations.

Non-medical workers, for instance persons connected with charity organizations and with the church, are being taught, thanks to the many lectures, group talks, and to the literature which is being circulated, that certain behavior observed in the home, the school and other relationships, spells a mal-adjustment and are learning to refer such instances to the psychiatrist. These problems to be understood must see the individual as a whole with all his antecedents, physical and mental, heredity, experiences, education, and their bearing upon the shaping of his personality in a pathological direction.

To-day psychiatry is being recognized as a branch of medicine of the widest scope. Increasing demands are coming from various organizations for its services, for instance in education, health, industry, child guidance, from the courts,

vocational adjustment bureaus, penal institutions, social welfare agencies, and mental hygiene societies. These demands show the progress that psychiatry has been making, even in a very few years, in being recognized by the laity as the only appropriate branch of medicine to take care of these problems. This shows that there is an increasing demand for the psychiatrist, but the ranks are not full enough to meet this demand. It is useless to think of psychiatry to-day defined within fixed limits, psychiatry is no longer static, it has extended so far out from the hospital, that the distinct markings of the frank psychoses have shaded off into the dim lines of what are apparently slight deviations from the normal, which only a few years ago would have been disregarded, but which, nevertheless, may be the basis of a serious social mal-adjustment.

Psychiatry has advanced to that point, where it is recognized that its legitimate field, aside from the hospitals, is in such extra-mural activities as have been stated, therefore it is the duty of psychiatry to see that the field is covered. Our hope lies to a certain degree in the scholarships, and fellowships in psychiatry, which recently have been brought about through contributions by individuals and foundations with the co-operation in the main of the National Committee for Mental Hygiene. But this can supply only a modicum of the numerical and quality personnel required. The fact is that the field of psychiatry has broadened to that degree where special training for work in the various activities and types of clinics, such as have been referred to, is required.

Medical schools do not cover such needs as have been indicated. The authorities at least in one instance have planned,¹ and this should become general, to include in a course in psychiatry lectures on such subjects as mental deficiency, mental mechanisms, juvenile delinquency, psychiatry in relation to crime, the concept criminal, types and purposes of institutional care, psychological tests, child guidance movements, conduct disorders from the psychiatric viewpoint. The psychopathic Hospitals, where they exist in connection with or near medical schools, can be utilized for clinical lectures and observations. This would no doubt go a long way towards making an appeal to the student, attracting him to the specialty of psychiatry.

There is an abundant literature which has been issued within the past few years, which shows that in behavior cases in children there are exhibited the same mental mechanisms as exist in the adult suffering with psycho-neurotic tendencies or psychoses. There could be no richer field for the instruction of the student, than such clinics as this literature is based on.

Psychiatry is concerned in its pathological side with the whole field of human behavior, even from slight evidence of deviation from what may be taken as the normal, to the most exaggerated conduct of a psychosis. Psychiatry must, therefore, take into account all the social factors related to any individual case. The individual is surrounded by an environment which constantly grows more complex as his activities in life gradually take on a widening range. If failure comes it may occur in the child in adolescence or at any subsequent period.

Now we have a new worker, namely, the trained psychiatric social service worker, who has taken the place of older systems, such as would be represented by the often unsystematized methods of philanthropy in which a mistaken sympathy often existed where there should have been some constructive plan.

This worker, with the background of a liberal education, having at least some academic knowledge of the social sciences, must needs be equipped through her special course of training with a comprehensive knowledge of clinical forms of psychiatry and their mechanisms, as Herman M. Adler says,² on the social side with the practices which are taught in regard to housing, education, economics and other matters, such as recreation. She must absorb in a given community a definite knowledge of all agencies which exist in that community for certain needs of the patient which are sure to arise, not only on his individual account but also in regard to all of his interests, his family and his economic relation.

The development of the psychiatric social worker was a necessary sequence of social psychiatry, because there was a definite and specialized form of social service work to be done. On this account there was required one specially equipped for the gathering of data and submitting to analysis the social problems of the patient to the end that the psychiatrist may obtain the only kind of assistance that will be of value to him in

determining the diagnosis and treatment of the patient. The *raison d'être* for the psychiatrist social worker is that the psychiatrist centers his attention upon the patient, the psychiatrist social worker traverses the whole circle of the patient's environment. The psychiatrist social worker, in a wider sense, becomes "a specialist associated with the psychiatrist, and professionally subordinate to him."²

One of the greatest advances which has been made within a few years is a discovery of social psychiatry that mental difficulties of adults, often begin as habits in childhood, as primary and then conditioned fears lasting into adult life, as dreams and fantasies; the prolonging far beyond adolescence of an infantile type of emotional bond of affection for parent; as shyness, seclusiveness, jealousy, sensitiveness; as the spoiled child; all may be forerunners of a socially mal-adjusted or even psychotic adult. These results are being forestalled to-day undoubtedly in a great many instances by the work carried out in "Child Guidance Clinics" and "Child Habit Clinics."

Attempts have long been made to erect a psychiatry based on anatomical changes in the brain, but such attempts were only partially successful, and those that were successful were in connection with changes found in diseases which were of organic origin. The functional psychoses have thus far never been explained by tissue changes in the nervous structures. Ever since 1870, or thereabouts, we have as psychiatrists been busily engaged in the descriptive stages of psychiatry. We have long been content with minutely descriptive psychiatry. This method of study has become a routine and a necessary part of the practice of the psychiatrist, but if we went no farther, we should be left in a static position for all time, because it does not tell us the why of what the patient does or what he says. Until Freud's time no psychiatrists were looking for psychological explanations of psychotic behavior. The psychotic activity behind the acts and expressions of such behavior were described in terms which we became quite accustomed to employing. It seemed sufficient to state that such an such conduct was "stereotyped," "negativistic," that there was "mutism," that some patients were "decorative," some "depilatory," that there was "echopraxia," "echolalia," "incoherence," verbal salad,"

and so on almost *ad infinitum*. Whatever one's personal opinion about the claims of the psychoanalyst there is no question but that the psychological and therapeutic methods of Freud have had the effect of turning the attention from the more obvious manifestations, which have been our chief point of attack, towards the effort to find out the meaning of symptoms. For instance, —in an actual case a patient suddenly dashes his head against a heavy wire glass panel of a door, with such force as to shatter the glass and lacerate his scalp. At one time in the care of mental cases we would have dressed the wounds and would have protected the patient from a chance to repeat his act. The patient would have been regarded probably as suicidal and a close oversight placed over him for an indefinite time. In this instance first care was given the patient. In a prolonged interview it was finally brought out that he had since his youth been ashamed of his small size. But the real disturbance of his mental equilibrium has been of years duration. It is that his genitalia have never developed beyond the juvenile type. His act was an attempt to escape from the exposure of his person before others on a bathing day. This is an instance of a simple case that did not offer great difficulties in getting at the root of the matter, but it points out that the ideal course is to learn the why of behavior if possible.

The psychology which has been the outcome of Freud's method shows how thin the partition is which separates the healthy from the neurotic, the neurotic from the psychotic. The mental mechanisms which have been evolved from modern psychology have shown that the cleavage between mental health and mental disease is not so sharp. In sleep even the personality may be changed into a primitive semblance; the unfulfilled wish may surge to the fore. Our evidence of progress is that through modern psychology we have a better understanding of the so-called insane than ever before. The conduct of the psychotic has ceased to be so senseless to our minds, the "word salad" has a meaning, if we can only find it.

It does not seem that the technique of psychoanalysis can be of value in the essential psychoses, but from what the literature reveals we may conclude that in hysteria, in anxiety states and in

compulsion neuroses, this therapy may be of value in some cases. Not only the school of Freud, but that of Adler and Jung, it is generally conceded, are contributing something to psychiatry.

The practical application of psychiatry to problems which arise in connection with criminal laws is attracting the attention of jurists as it never has before. The question of "insanity as a defense for crime" has furnished a subject for contention between the medical and legal professions since the middle of the last century. Attempts have been made in England to draw the medical and legal professions nearer together, but have not succeeded, as far as material change in the laws is concerned. In this country we are fortunately making progress. For the legal profession and the psychiatrists, as represented by the American Bar Association, the National Crime Commission, and the International Prison Congress are in agreement that procedure should provide for the study of the individual offender by properly qualified and impartial experts co-operating with the Courts.

At a National Conference called by that National Crime Commission and held in Washington, D. C., in November of last year, one whole session was given up to the general subject of "Substitution of Scientific Mental Examination of Prisoners for Present System of Paid Expert Testimony," in which the legal and medical points of view were discussed. While there are differences of opinion, they seem to rest on the part of the legal profession, on the legal aspects of the law in respect to the conception of responsibility. However, the conception of the psychiatrist that it is not the crime but the individual criminal that should be the factor in determining what should be done with him is apparently gaining ground. That is, the psychiatric view-point concerning these offenders is beginning to be sought by the Courts. How to obtain such accurate and technical knowledge as a court and a jury need in criminal cases has been the stumbling block. It will never be solved by the summoning of paid and partisan experts, nor by the hypothetical question which either side can erect to suit itself. It is a question of procedure as to how reliable and non-partisan medical evidence can be introduced.

Massachusetts has taken a long step forward in the direction of simplifying this problem. In 1921 a statute was passed by the Massachusetts Legislature, known as the "Briggs Law," which provided that when a person is indicted by a grand jury for a capital offense, or if known to have been indicted for any other offense more than once, or previously convicted of a felony, and is indicted or bound over for trial, the Clerk of the Court or Trial Justice notifies the Department of Mental Diseases. This Department has an organization of which a Director for Examination of Prisoners is the head. This division under the Department of Mental Diseases operates throughout the whole state. Every person accused of crime or offenses as mentioned is given an examination as to his mental condition, then a report is filed with the Court as to the results of the examination by the psychiatrists, which is accessible to the court at the trial.

By this procedure it is possible for every justice of a court to be put in possession of an opinion, furnished by qualified psychiatrists, as to the mental condition, sane or insane, of every prisoner such as has been indicated, who comes before him. The law is working, I am informed by officials, in a highly satisfactory manner.

Statistical data as to results are highly interesting. They will not be gone into here, except to state that up to a certain date, of 382 persons examined 31 were reported as "insane." In only one instance, according to Dr. Overholser,³ Director of the Division for Examination of Prisoners, did a judge, despite the evidence, find the defendant sane and sentenced him to State Prison for manslaughter. "The psychiatrist's report was justified within a few months, however, when the prisoner manifested symptoms, threatening fellow prisoners, and accusing them of conspiring to injure him, then, but not till then was he committed to the State Hospital for the Criminal Insane."

There have been Juvenile Courts in various parts of the country and a probationary system in connection with them for years. The introduction of an organized clinic for the purpose of bringing to the aid of the justices of such courts a personality observation and a careful evaluation of the social surroundings of the juvenile, by the personnel of a psychiatrist, a psychologist and a

psychiatric social worker, is another step in the progress of applied psychiatry of recent development of far-reaching importance.

It was about seventy-five years ago that General Paralysis was recognized as an entity. Its relation to syphilis as a cause was suspected years ago, but never proved until within a few years by means of the Wassermann and other serological tests. We have progressed in the early and positive diagnosis of the disease and thereby also in its earlier treatment. Arsphenamine and other forms of arsenical preparations, have seemed in an appreciable number of instances, in my experience, to delay the malignant progress of the disease, prolong the life of the patient and even, in a number of cases, economic productiveness. But on the whole results have not shown the degree of benefit anticipated at the very first. Of the malarial treatment of General Paralysis in the hands of some, the results warrant a thorough trial.

Studies in epilepsy have centered around both the organic conception of its cause, while on the other hand its genesis is looked upon by some as residing in the personality of the individual. On the organic side it has been held that disordered metabolism, or parathyroid insufficiency may exist in these cases, but as common factors they do not seem to exist in all cases studied.

The treatment of epilepsy is hygienic and dietetic with phenobarbital as the usual medication with or without the combination of other usual remedies. The former has given encouraging results in being followed by a reduction of the number of seizures in a good many cases and apparently with their cessation in some instances, but no absolute cure is hardly to be claimed.

We are beginning to recognize that disturbances of the internal secretions may have a bearing upon mental disorders. Robertson states,⁴ "If the future holds for us a great therapeutic discovery in the domain of mental disease, it will probably be found in a knowledge and control of internal secretions."

Under the head of "Individualization" we may treat in a brief way of a number of conditions and therapeutic measures, which in hospitals for mental diseases, with their great numbers of patients, are bringing patients *individually* into closer touch with definite agencies for their care,

treatment and rehabilitation. During the past twenty-five years these great institutions have been growing more highly organized. In hospitals which are striving to meet the requirements of the individual patient, and where there is being furnished, on as adequate a scale as can be obtained, the means to meet such requirements, there is an ideal. In working towards this ideal, always providing for the maximum of co-operation, the organization is being divided into units as to its numerous activities. As a result medical staffs of hospitals for the mentally-ill, are being increased numerically. There are units of medical service comprising as heads the medical director, the clinical director, the clinical psychiatrist, the psychologist, the psychotherapist, the pathologist, the serologist. Then comes the physical therapy department, the occupational therapy department, the social service department, the out-patient department, and there are others. As a result, there has come about a more critical study of each patient, physically, mentally and socially, than was ever the case before. Indications for special treatment, whether it has to do with purely medical measures or means for the patients' re-adjustment, whether within or without the hospital, are more positively realized.

Occupational Therapy is a medical measure and should never lose its place as such in the organization of the hospital. A gain has been made in this branch in that there is a demand for a highly intelligent and highly specialized person to be at the head of the department but subordinate to the physician.

While on this subject of "Individualization" I wish to speak of Music as a valuable therapeutic aid in hospitals for the mentally sick. I am not speaking of music as a means of entertainment, though that has its place, but I am claiming for music an important place in the therapeutic scheme. Its value is derived from having the patients, themselves, take part in producing or engaging in some form of musical expression. The best and most adaptable form is singing *ensemble*.

Under proper direction they will learn to sing with the greatest amount of expression. The therapeutic value is derived on the physical side from the increased intake in oxygen, the muscular movements, and the stimulation of the circu-

lation. On the mental side there is the training of the attention and the co-ordination of each individual with the entire group. The selections to be sung should be of a high standard as to character and sentiment. Suffice it to say that experience has shown that a systematic program of musical therapy has undoubted value. This is little realized in general. To be carried out the musical department should be in charge of a musical director, who is a musician, and who can bring to the work a psychological appreciation of the intellectual, the ethical and the aesthetic value of music.

Physical Therapy in its various forms, such as hydrotherapy, the use of light and heat radiation, and the varieties of electrical currents that are in use not only have potential properties for benefiting physical conditions, but they serve a purpose in the "Individualization" of the patient, to which I am calling attention.

The standard of Training Schools for Nurses in hospitals for mental diseases has taken rank with that of the training schools of the general hospitals. Officials of training schools in general hospitals are realizing the importance of securing affiliation for their pupil nurses with hospitals for mental diseases.

In the period included in this paper we have seen a remarkable instance in which a single individual has been the author of a movement which has had its beginnings outside of the medical profession, and has swept across the world. I refer to Mr. Clifford W. Beers and the Mental Hygiene Movement. The story of Mr. Beers is too well known to repeat it here. Mental Hygiene or some similar movement would in all probability have come later, perhaps through the requirements of the World War. Nevertheless, Mr. Beers was the sole individual who arrested the attention of the reading public, through his book, "A Mind That Found Itself," which was published originally with the object of bringing about an improvement in the care of the insane. Out of this grew the constructive plan of forming a society for Mental Hygiene.

The first society was that of the Connecticut Society for Mental Hygiene, founded in 1908. There followed the next year the formation of the National Committee for Mental Hygiene, and in the following years societies for Mental Hy-

giene, have been founded in nearly every state, with affiliations with the National Committee for Mental Hygiene. Furthermore, Mental Hygiene as an organized movement, has spread to foreign countries. I do not need to go into further detail. What I have in mind is—how can we formulate an expression of the relationship of Psychiatry to Mental Hygiene? Physical Hygiene rests upon the Medical Art which is contributed to by the exact sciences. In the same way Mental Hygiene rests upon that branch of the medical art which is psychiatry, with whatever is contributed to it by any of the scientific social sciences. Now we see under the name of "Mental Hygiene," which we rejoice to say has become a household word, the principles of mental health which rest upon psychiatry, penetrating even into nearly every village. Under the name "Mental Hygiene" psychiatry is being carried into the schools, and into the higher institutions of learning, as witnessed in the program which Dr. Arthur H. Ruggles is building up and reducing to working principles in Yale college and elsewhere. We see Mental Hygiene being taken into the field of industry. There are many ways in which under the agencies of the National Committee for Mental Hygiene practically every field which affords an opening for extending the work of mental hygiene with the psychiatric background is being entered. It would seem, therefore, that the relationship which I am trying to formulate might be expressed by stating that Mental Hygiene, whether it deals with mental health or mental disease, is socialized psychiatry aiming at the maximum degree of its socialization.

The writer has attempted to treat this topic in a brief way from the biological standpoint, on the one hand and on the other from that of applied psychiatry, bringing out only a few outstanding features. The last quarter century is, I believe, the very beginning of the scientific era of psychiatry. We have approached it by painful stages. We have passed through the "demonological" stage; through that in which mentally-sick were treated as criminals; through the philanthropic and humanitarian periods. Ignorance and fear have at last given way to an understanding of the so-called insane. The asylum has generally been replaced by the hospital. Modern methods

and the growing demand for the psychopathic hospital show the passing of the fatalistic attitude toward all mental disease. Prevention has become ideal with the emphasis placed on the early years of childhood.

Psychiatry very curiously presents a paradox. It is a branch of medicine, yet it is all inclusive, because it must regard the totality of the organism and all its reactions.

We may regard this first quarter of the twentieth century as a period from which we may look back upon a world of error, as regards mental disease, from which we have been gradually emerging. We are now beginning to advance with a justifiable optimism for the future of psychiatry. The task ahead is a momentous one, but it is an enterprise for which there has been no match in the history of the world. Its very uniqueness is a stimulus which will never allow us to lag in pressing forward to the "Ideal of Knowledge."

¹C. P. McCord, *American Journal of Psychiatry*, Oct., 1925.

²Herman M. Adler, *American Journal of Psychiatry*, April, 1927.

³Report of Proceedings, National Crime Commission, Nov. 2, 1927.

⁴London *Lancet*, July 17, 1926.

OBSTRUCTION TO NASAL BREATHING

BY DR. L. L. ALBERT
YONKERS, N. Y.

The maintenance of unobstructed nasal breathing must be considered both from a subjective as well as from an objective point of view. Unobstructed nasal breathing is an important function of the human body. Obstruction not only will cause material interference with an individual's activity and happiness in life, but also will cause more or less serious pathological changes.

The nature of the obstruction may be either of physical or neurogenic origin. The latter are usually intermittent and temporary, as in certain cases of asthma. Obstruction may be within or without the nasal cavity itself or the naso-pharynx. Obstructions within the nose rarely come from the upper or lower walls (roof and floor of

the nasal cavity), but commonly from the lateral walls and turbinates and from the median wall or septum.

Air passing through the nasal cavity normally meets a certain amount of resistance from the turbinates. If the turbinates are enlarged, the movement of air is retarded and the unit-quantity of air which passes through the nose at one time is greatly diminished. Experiments have shown that the greatest part of the air passes through the middle nasal space. Obstruction in this region, therefore, is usually of more serious import. Where both the inferior and middle nasal spaces are obstructed, however, clinical experience shows that by removing only the tip of the inferior turbinate, free nasal breathing almost always can be re-established. This is not the case if the middle nasal passage only is cleared.

Most cases of nasal obstruction to breathing are caused by hypertrophy of the inferior turbinates. These turbinates are, therefore, the most common object for surgical or medical attack, their removal being indicated when the hypertrophy interferes with proper nasal breathing. The physiological functions of the nose suffer in no way by the removal of the tips of the turbinates.

The turbinate obstruction may be temporary, as in engorgement of the cavernous erectile tissue, or permanent, as in actual hyperplasia. The treatment should be the same in both instances. The mucosa of the inferior turbinate may be thickened at either end (anterior or posterior) or along its entire length. Enlarged posterior tips are common. They are frequently overlooked, however, as they are somewhat difficult to see on routine nasal examinations. They act as valves in the posterior nasal openings and cause obstruction wholly out of proportion to their size. While these enlarged tips are removed best with the cold wire snare, the remaining mucosa if uniformly thickened is removed best with scissors. The galvano-cautery is applied only in cases of uniform flat swelling of the mucosa.

Other cases of enlarged turbinates are caused not by the thickened mucosa, but by the shape and curvature of the turbinate bones projecting into the nasal cavity. In such cases, parts of the bone also must be removed. Experience, only can teach us how much to remove. It is rarely necessary to remove any part of the middle turbin-

ate either on account of enlargement or deformity. Turbinates should never be removed for such temporary conditions as rhinitis or acute sinusitis.

Polypi act as obstructions even when very small. As they are usually pedunculated, they swing back and forth with the air currents. They may extend to the inferior turbinate, the nasal floor or even outside the nostrils. They, also, are removed with the wire snare.

Lupus and gummata may cause obstruction by infiltration of the nasal mucosa, especially of the septum. Scleroma, also, may form solid pads on the turbinates.

The nasal septum should be a uniformly even surface standing vertically in the sagittal plane of the head. It rarely has this ideal shape but deviates to either one or both sides. The concavity of one side corresponds to the convexity of the other. The nasal cavity is therefore diminished on the convex side. The common operation for relief in such cases is the septal submucous resection. In very difficult cases, the window resection can be employed, establishing a large window and removing both layers of mucous membrane together with as much cartilage and bone as may be necessary. It is only the small irregular perforations of the septum which are troublesome. Large perforations of the septum in an otherwise healthy nose are harmless.

Ridges, spines and spurs occur on the septum and may cause obstruction to nasal breathing. They are usually located anteriorly, but they also may extend as far back as the rostrum sphenoidalis. They may be either cartilaginous or bony. They obstruct according to their shape, size, and location. They should be removed if giving trouble.

Hematomata and abscesses of the septum cause obstruction and are usually due to trauma. As a rule they occur in children. Cancer is rarely found in the septum.

Atresia of the posterior nares is often congenital, but may also be acquired through scars and adhesions. Nasal secretions, such as pus or dried crusts, also may produce sensations of breathing obstruction. This latter occurs in certain cases of ozena where as a matter of fact the nasal space is often extremely large.

Obstruction to nasal breathing is sometimes due to the presence of foreign bodies. This is

often seen in children in whose noses the foreign body obstructions have gone unrecognized for years. Rhinoliths of organic and inorganic constituents are found in the nose, usually on one side only.

Outside the nose itself, enlarged tonsils with adenoid growths are, especially in children, a very common cause for obstruction to nasal breathing.

In adults, the naso-pharynx is a favorite site for gummata. Suspicious cases should have a blood Wasserman examination.

Bearing these various possibilities in mind, there is no reason why the majority of patients suffering from obstructed nasal breathing may not readily and properly be differentiated and treated.

MISCELLANEOUS

COMMERCIAL PREPARATIONS OF DIPHTHERIA TOXIN-ANTITOXIN

The value of toxin-antitoxin administration in protecting against diphtheria is well established by an abundance of reliable evidence. The results outlined by Paul S. Rhoads, Chicago (*Journal A. M. A.*, Jan. 28, 1928), emphasize, however, that to obtain good results the potency of commercial preparations employed must be controlled carefully. From the results reported, the necessity for Schick retests three months after the last dose of toxin-antitoxin and more immunizing doses when they are indicated is evident. Wide variations were found in the potency of commercial preparations now on the market, and in some instances there was even considerable difference among the lots made by the same manufacturer. Banzhof has pointed out that the new mixture containing 0.1 L + dose per cubic centimeter deteriorates with age more rapidly than the 3 L + dose preparation. In the tests on preparations B and D, the expiration of potency dates were as far removed from the dates of the tests as in the cases of preparations A and C. The time element does not account for the difference in potency here. When large numbers of toxin-antitoxin immunizations are to be done, it is advisable to make tests for potency on the particular lot of toxin-antitoxin to be used before the work is undertaken.

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EDITORIALS

THE "POISON" IN ILLICIT LIQUOR

In recent years statisticians have noted a general increase in the number of deaths supposedly due to alcoholism. This has been attributed to the greater toxicity of the alcoholic liquors which are now generally used, as compared with the "good old pure liquors" of pre-prohibition days. There have been frequent comments regarding the so-called "poison element" in the liquors obtainable, which are chiefly of an illicit character.

Some interesting observations and studies have recently been made in Massachusetts, under the supervision of the State Department of Public Health, which throw an important light upon this problem. For many years the laboratory of the Division of Food and Drugs has had charge of the examination of all specimens of liquor brought in by the police in connection with possible prosecution for illegal sales. In recent years the number of samples has increased to between 8000 and 10,000 annually. This enormous material has offered a real opportunity for studying the actual character of illicit liquor in common use. It is fair to assume that conditions in Massa-

chusetts are not essentially different from those in other communities where there is any appreciable amount of illicit liquor.

Mr. H. C. Lythgoe, the Director of the laboratory, has reported on the chemical examination of the many samples. It was thought that perhaps the new and strange methods of concocting the more recent alcoholic beverages might result in the production of unusually toxic substances that would not be detected by the older methods of chemical examination. Accordingly 100 samples of liquor were turned over to Dr. Reid Hunt, Professor of Pharmacology at Harvard Medical School. He made a very elaborate series of animal experiments for toxicity, with careful controls.

From both the chemical and the biological examinations the only real poisonous substance found in the samples was *ethyl alcohol*, and the toxicity of the various samples was found to be closely parallel to the ethyl alcohol content. In fact a sample of genuine, bottled-in-bond whiskey was found to be more toxic than any of the illicit liquors except possibly three samples. This was evidently due primarily to the high content of ethyl alcohol. Speaking generally therefore, in Massachusetts at least, the usual illicit liquor was on the average far less dangerous to life than the "pure" pre-prohibition liquor.

Extraneous substances such as methyl or "wood" alcohol, methanol, furfural, etc. were present as a rule in amounts that were not of serious import. The proportion of these substances has been very largely exaggerated in popular accounts. Also the importance of methyl alcohol in small amounts has been grossly exaggerated. According to Hunt methyl alcohol actually dilutes the other alcohol, so that animals tolerate larger doses of some mixtures of these alcohols than of either alone.

In other words the increase in the number of deaths from alcoholism is apparently not due to extraneous "poison" in the liquor obtainable, or poisons developed during the course of rapid or careless preparation of these liquors. The problem is not one of "good" or "bad" alcohol, but is primarily one of ethyl or "pure grain" alcohol content.

The reason for the increase in alcoholic deaths in recent years, which is a fact and not a theory, is not entirely apparent. Dr. G. H. Bigelow,

Commissioner of Public Health in Massachusetts, suggests that it may be a result of changes in the drinking habits of the community. He believes that more liquor is now being consumed in a shorter period of time than previously, and many people feel that when liquor has been analyzed and found to contain nothing more toxic than ethyl alcohol that the product can be consumed with impunity. The general public does not seem to realize that ethyl alcohol, even when "pure" is a potent drug, and when taken repeatedly and in high concentration may have very serious results. A fact very frequently overlooked, according to Hunt, is that a person deeply intoxicated is near death, and that a dose of alcohol only slightly greater than that necessary to cause profound intoxication may be a fatal dose.

SIC JUBEO

In the maze of statistics on almost every conceivable subject in medicine and affairs in general we have none on the important subject of recalcitrance on the part of patients. Even in the more or less unclassified facts and figures on cancer we have never seen either figures or dissertation as to the probable number of cases that might have done well had they followed the advice of their physician. The writer can recall quite a few such cases, some of them now going on and if he, in such a strictly limited experience may recount a few the number in our large clinics and in general must be very large indeed. Of late quite a few speakers have urged more thorough examinations, early operation etc. etc. but we do not know how many patients have delayed availing themselves of the latest advances in scientific medicine until the earliest possible moment has advanced into the problematic or hopeless stage. It is difficult to know to what extent one should go in his oratorical urgings or his plaintive pleadings with a patient who presents himself with what is obviously an early malignancy. Success in such a case depends on the histrionic gifts of the medical man as opposed to the patient's inability to realize the possibilities of the case or his cowardice at entering upon an experience which is at the worst of but a little pain and inconvenience. The responsibility of those who give advice upon health matters is very great, and in

many instances those who oppose medical opinions and win a vacillating and wavering consent to gratify the ignorance of a so-called friend are guilty of the death of the patient with its concomitant social and economic losses.

What of physician who does not study his man and with all possible keenness convert him to the rational view of his own condition,—if the thing is possible and what of the patient who calmly makes up his mind to accept what comes without thought for the outcome. The former does not do his professional duty, the latter exercises his right to do as he pleases and takes his life into his own hands, hands which are not fit for such a trust.

It may be that this phase of medical thought is the result of the child who is allowed to do as he pleases throughout his youth, who admits no authority and whose parents have not studied to mold his mentality and mint a mind which is capable of self reasoning and mature thought.

But it is not only in the study of the problem of malignancy that the scientist finds himself confronted by lack of co-operation, but in many other conditions which readily suggest themselves. It may be the proud beauty who will not wear glasses and sustains severe injuries because of lack of proper vision, or one who will not have the appendix abscess drained because he has not the requisite pain, or the banker with the too well filled figure who overdoes in his exercise or the blood pressure case who fails to align himself strictly with the rules of his physician suggests or with his own common sense. Or peradventure the diabetic who indulges, or the alcoholic who takes a few too many,—and there are many others. Perhaps one can do no more or better than to tell them firmly and plainly just what the possibilities are and here ones richness of vocabulary may save a life; and quote Scripture. Pass-age,—“This do, and thou shalt live.”

AGE OVERTAKES THE PHYSICIAN

Conferring the degree of M.D. does not immediately render the recipient a master of the art of medicine. Several years of experience as an interne in a hospital are required before he is allowed to practice. Even then his education is incomplete. He steadily gains in experience from

contact with patients in hospitals, dispensaries and in private practice. His knowledge is increased by study of books and journals and by attendance at medical meetings and conventions. Finally there emerges as from a chrysalis, the trained physician, wise in judgment and experience. Through years of strenuous training he has learned to do his duty regardless of his personal need for sleep, exercise, recreation and regular nourishment. The necessities of his patients constantly take precedence over his own welfare. Too often he succumbs to some infection because his resistance has been lowered by long continued personal neglect. When age overtakes the physician it often finds him mentally or physically handicapped as the result of his strenuous training.

The physician who succeeds in maintaining a reasonable degree of personal health finds his declining years the happiest and most useful of his life. The skill acquired from many years of practice, the knowledge gained from many years experience, the tact resulting from innumerable personal contacts render his conduct gracious, his judgment accurate and his opinion precise. Loved, honored and respected by all, the aged physician fills a most enviable position in the community.

A CASE OF DOUBLE FRACTURE OF THE FEMUR*

BY ROLAND HAMMOND, M.D.

PROVIDENCE, R. I.

The following case is reported because of the unusual mechanical problems presented in a case of double fracture of the femur, where the upper fracture occurred at the junction of the upper and middle thirds of the shaft and the lower fracture occurred just above the knee.

E. T. Age 56. Was admitted to the Rhode Island Hospital on September 24, 1926, with a double fracture of the shaft of the right femur. While running to a fire, on the right hand side of the road, he was struck by an automobile from behind and thrown violently to the ground. Ex-

*Read before the Providence Medical Association, June 4, 1928.

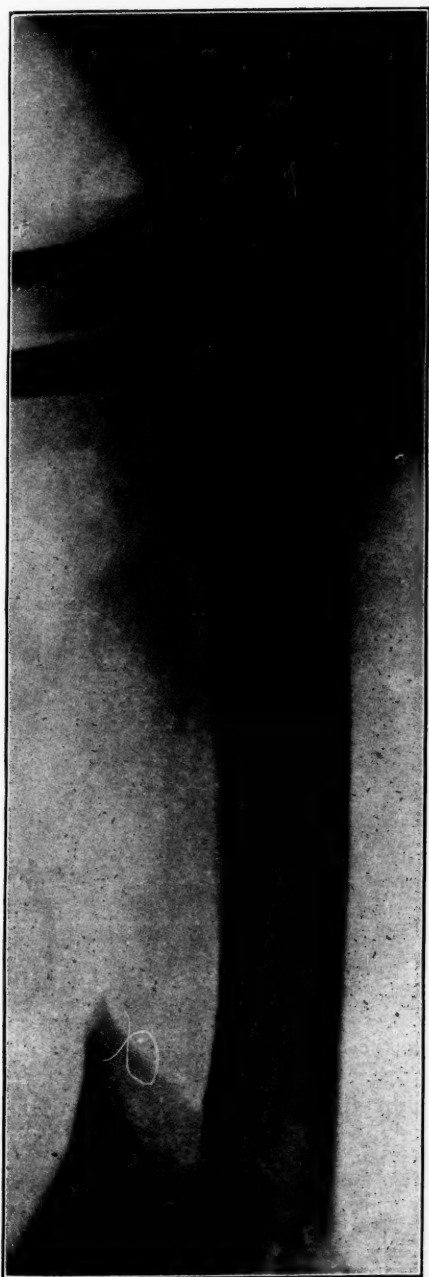


FIG. 1.—Double Fracture of Right Femur, antero-posterior view, after being put up in Thomas splint.

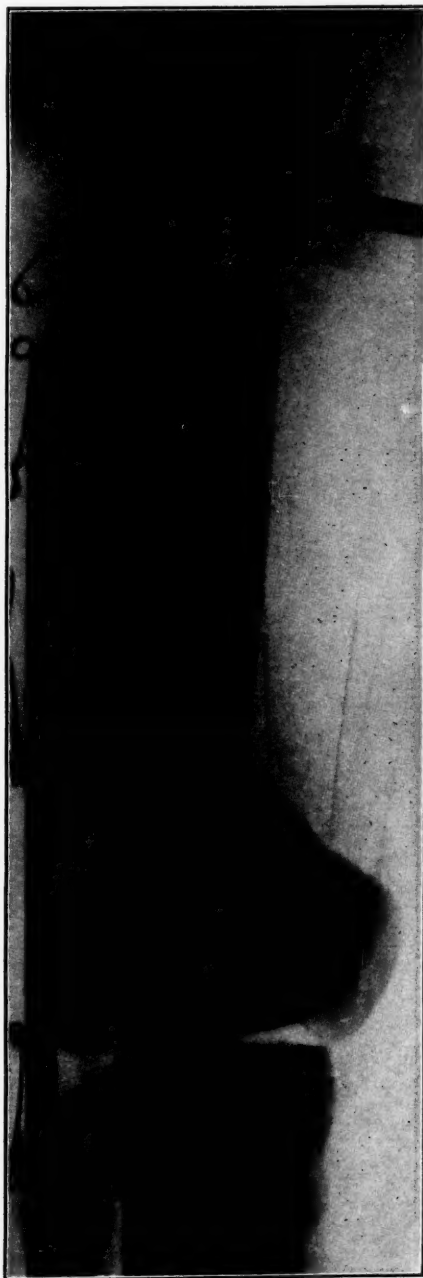


FIG. 2.— Double Fracture of Right Femur, lateral view, after being put up in Thomas splint.

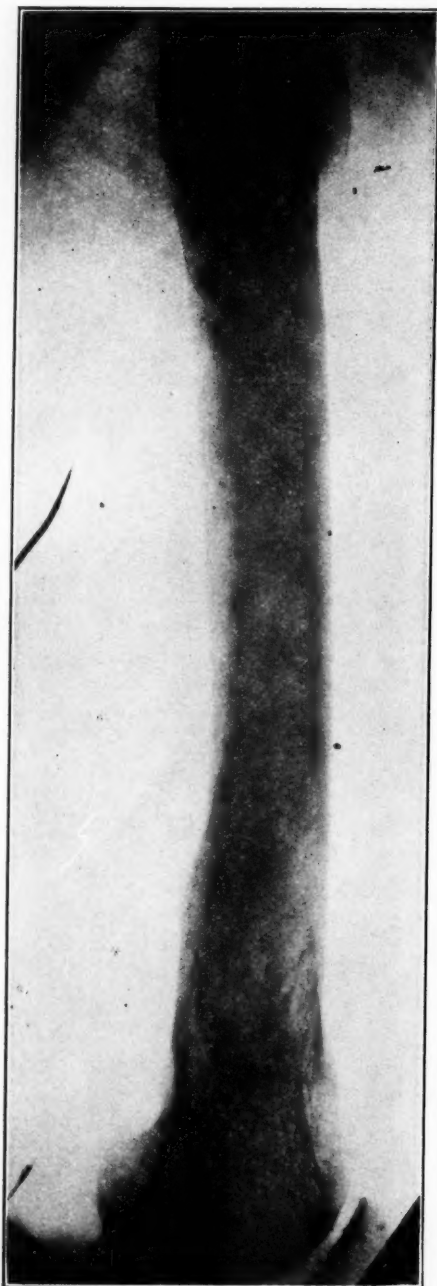


FIG. 3.—Double Fracture of Right Femur, lateral view, final result one and one-half years later.

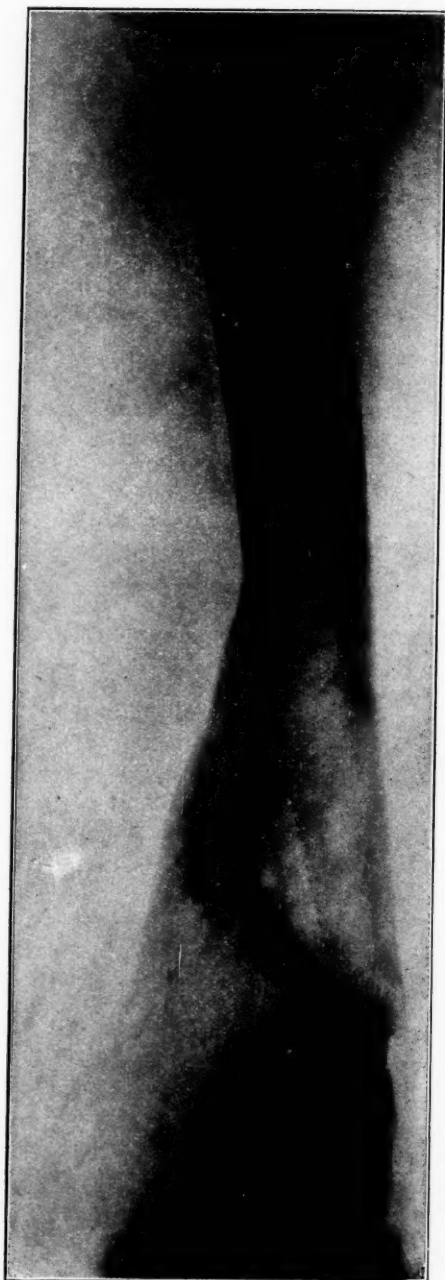


FIG. 4.—Double Fracture of Right Femur, antero-posterior view, final result one and one-half years later.

amination at the Hospital showed the right leg to be $4\frac{1}{2}$ cm. shorter than the left, and the foot was everted. There was marked tenderness and spasm all over the thigh with crepitus just above the knee and at the junction of the middle and upper thirds of the right femur.

On the following day, under ether anesthesia the fracture was reduced and both legs put up in elevation and abduction on two Thomas splints with a Balkan frame. In order to secure the necessary counter traction with the ring of the Thomas splint against the tuberosity of the ischium, a special Thomas splint was made and applied. It required also some special changes in the Balkan frame. Weights were gradually increased and in ten days the leg was down to length. Four weeks later X-ray examination showed good position of the fragments and a moderate amount of callus formation. On December 25th he was allowed up in a chair and a month later was walking with crutches. There still remained considerable stiffening of the knee for which he was given diathermy, massage and gymnastic exercises. Since there remained considerable stiffness of the knee he was given gentle manipulation under gas-oxygen anesthesia on June 22, 1927 and on September 23, 1927. On January 20, 1928 the right knee was again manipulated and the few remaining adhesions broken up. On March 5, 1928 examination showed the length of legs equal or with perhaps $\frac{1}{4}$ " shortening. The right knee could be flexed to 80° . The right lower extremity was practically straight, while the left side showed some general outward bowing throughout. The final X-ray shows both fractures healed with slight deformity.

The interest in the above case lies in the fact that the fractures at two locations in the femur called for a different mechanics in the case of each fracture. In the treatment of a fracture at the upper third of the femur it is necessary to put the leg in elevation and abduction and better results are obtained if both legs are put at the same angle in order to fix the pelvis. Fracture at the lower end of the femur usually requires some flexion of the knee, which was probably not necessary in this particular case. It also shows the necessity of modifying apparatus to meet the needs of an individual case to meet the special problems involved.

This case was under observation and treatment for nearly two years, and the writer is strongly of the opinion that all fracture cases should be kept under observation until complete functional result is obtained or until it is shown that such a result cannot be attained.

(This patient presented himself before the Association; he could execute all movements required of him with no evidence of discomfort and walked with no perceptible hesitation or limp.—Ed.)

OBITUARY

CHARLES FENNER PECKHAM, M.D.

Charles Fenner Peckham was born in Providence September 11, 1869, the son of Dr. Fenner H. Peckham and Mary H. Olney Peckham. He died at his summer home, Warwick Neck on August 19, 1927, in his 59th year, following a cerebral hemorrhage.

He was educated at the Mowry & Goff school in Providence and at the College of Physicians and Surgeons in New York City, from which institution he was graduated with the degree of M.D. in 1891. His father and grandfather were both doctors and both served in the Civil War. For many years Dr. Peckham was associated with his father in the general practice of medicine.

Dr. Peckham was active in the military affairs of the State of Rhode Island. During the Spanish War he served with the Naval Reserve. On July 1, 1896, he was commissioned Lieutenant and Surgeon, R. I. Naval Battalion and served as such until December 18, 1900. He was on leave of absence in U. S. Volunteer Service in the war with Spain from June 29, 1898, until September 20, 1898. On January 15, 1902, he was again commissioned Lieutenant-Colonel and Assistant Surgeon-General of Rhode Island. He was honorably discharged on May 1, 1909, and was commissioned Major and Surgeon, Medical Department, Rhode Island National Guard. On February 23, 1910, he was commissioned Colonel and Surgeon-General of Rhode Island and served as such until September 29, 1915, when he retired with the rank of Brigadier-General.

He was elected a member of the school committee from the fourth ward to fill out an unexpired term on March 29, 1913.

Dr. Peckham was one of the charter members of the R. I. Commandery, Military Order of Foreign Wars, which was instituted on February 28, 1900. In this organization he served as Commander for many years and later as Emeritus Commander.

About twenty-five years ago he studied in Europe with Cohnheim and became interested in gastro-intestinal diseases. During the past twenty years of his practice he specialized in this branch. In 1917 he published a monograph entitled, "The Intestinal Putrefactions." In March, 1920, he published an original article in the R. I. Medical Journal entitled "The Thilerium Hominis." In this article Dr. Peckham described the life of a new parasite in the blood.

On January 4, 1916 he married Isabel M. Rhodes who survives him. One sister, Alice Peckham, also survives him.

Dr. Peckham at the time of his death was a member of the Hope, University, and Anawan Clubs, and also of the Army and Navy Club of Washington. He had previously been a member of the Squantum and Warwick Country Clubs.

Dr. Peckham was of genial disposition, popular wherever he went and was beloved by his patients.

Signed,

JAMES H. DAVENPORT, M.D.

CHARLES W. HIGGINS, M.D.

CHARLES O. COOKE, M.D.

MISCELLANEOUS

FACTORS IN HUNGER

What is hunger? Mere introspection will not furnish a tenable answer to this question. The sensation commonly designated by the term hunger is usually referred in a somewhat vague way to the region of the stomach. Physiologists who have studied the demonstrable changes in this organ have discovered that when empty it undergoes intermittent contractions that can often be correlated with the peculiar sensations of hunger. As the stomach empties itself, the ordinary digestive contractions give way to a different type

of muscular reaction—the so-called hunger contractions. Thus the textbooks propose the theory that hunger sensations or hunger pains are caused by contractions of the stomach which presumably affect some as yet undescribed sensory apparatus. There have, however, been challenges to the view that hunger is mainly of gastric origin. Central factors have been held responsible by some critics. It is suggested that a depletion of readily available food reserves in the blood affects the hunger center and that this gives rise to gastric contractions which, in turn, awaken the sensations that are recognized as hunger. Hoelzel,¹ who has investigated the question at the University of Chicago, points out that this explanation fails to account for the periodicity of the gastric hunger contractions. Moreover, Carlson produced gastric contractions by local stimulation in a subject with a gastric fistula. These contractions were experienced as hunger although they were not of central origin. Hoelzel himself ventures to support the possibility of central factors in the genesis of hunger on evidence that the gastric contractions may occur without giving rise to hunger sensation, and hunger may be experienced independent of these contractions. He succeeded in suppressing the desire to eat with an excessive food intake and finding that the subsequent gastric (hunger) contractions were then experienced as local (epigastric) sensations without hunger. On the other hand, hunger was manifested independent of gastric contractions after more or less prolonged abstinence from food. The common reference of hunger to the stomach is regarded by Hoelzel as being largely a consequence of manifestations that are mainly incidental to hunger. Hoelzel suggests that although the feeling of emptiness helps to refer hunger to the stomach, a more fundamental reason for this association evidently is the fact that hunger due to central conditions is ordinarily present when the periodic gastric sensations are manifested. But the epigastric sensations are often disagreeable and usually develop suddenly, while hunger due to central factors is not inherently disagreeable and the exact time of its onset defies introspective analysis. Consequently, he adds, the more prominent sensations in the gastric region are likely to be accepted as the index to hunger. Likewise, headache, weakness, mild nausea or other symptoms may come to be regarded as signs of hunger when they are regularly associated with it.—*Jour. A. M. A.*

¹ Hoelzel, F.: Central Factors in Hunger, *Am. J. Physiol.* 82:665 (Nov) 1927.